Zion Crossroads WWTP VPDES Permit Modification Application for VA0090743

Louisa, Virginia

Dewberry Project Number: 50053662

June 2012

PREPARED BY:

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PREPARED FOR::

Louisa County Water Authority
P.O. Box 9
Louisa, Virginia 23093

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Appendix A

NPDES Form 2A

FACILITY NAME AND PERMIT NUMBER:
Zion Crossroads WWTP VA0090743

Form Approved 1/14/99
OMB Number 2040-0086

FORM 2A NPDES

NPDES FORM 2A APPLICATION OVERVIEW

APPLICATION OVERVIEW

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

BASIC APPLICATION INFORMATION:

A. **Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.

B. **Additional Application Information for Applicants with a Design Flow ≥ 0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.

C. **Certification.** All applicants must complete Part C (Certification).

SUPPLEMENTAL APPLICATION INFORMATION:

D. **Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):

1. Has a design flow rate greater than or equal to 1 mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to provide the information.

E. **Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):

1. Has a design flow rate greater than or equal to 1 mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to submit results of toxicity testing.

F. **Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:

1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
2. Any other industrial user that:
   a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
   b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
   c. Is designated as an SIU by the control authority.

G. **Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)

FACILITY NAME AND PERMIT NUMBER:
Zion Crossroads WWTP VA0090743

Form Approved 1/14/99
OMB Number 2040-0086

BASIC APPLICATION INFORMATION

PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

A.1. Facility Information.

Facility name: Zion Crossroads WWTP

Mailing Address: P.O. Box 9
Louisa, VA 23093

Contact person: Wesley Basore

Title: Wastewater Operations Manager

Telephone number: 540-967-1122

Facility Address (not P.O. Box): 323 Deer Run Lane
Gordonsville, VA 22942

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant name:

Mailing Address:

Contact person:

Title:

Telephone number:

Is the applicant the owner or operator (or both) of the treatment works?

____ owner X operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

____ facility X applicant

A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES: VA0090743
PSD:
UIC:
Other: VAN030154
RCRA:
Other:

A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
Zion Crossroads	1,000+	Separate	Municipal

Total population served

A.5. Indian Country.

a. Is the treatment works located in Indian Country?

_____ Yes X No

b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

_____ Yes X No

A.6. Flow. Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

a. Design flow rate 0.1, 0.311, 0.7 mgd

	Two Years Ago	Last Year	This Year	
b. Annual average daily flow rate		.0848	.0923	mgd
c. Maximum daily flow rate		.2241	.1172	mgd

A.7. Collection System. Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

X	Separate sanitary sewer	%
_____	Combined storm and sanitary sewer	%

A.8. Discharges and Other Disposal Methods.

a. Does the treatment works discharge effluent to waters of the U.S.? X Yes _____ No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent 1
ii. Discharges of untreated or partially treated effluent _____
iii. Combined sewer overflow points _____
iv. Constructed emergency overflows (prior to the headworks) _____
v. Other _____ _____

b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.? _____ Yes X No

If yes, provide the following for each surface impoundment:

Location: _____

Annual average daily volume discharged to surface impoundment(s) _____ mgd

Is discharge _____ continuous or _____ intermittent?

c. Does the treatment works land-apply treated wastewater? _____ Yes X No

If yes, provide the following for each land application site:

Location: _____

Number of acres: _____

Annual average daily volume applied to site: _____ Mgd

Is land application _____ continuous or _____ intermittent?

d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works? _____ Yes X No

If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

_____

If transport is by a party other than the applicant, provide:

Transporter name: _____

Mailing Address: _____

_____

Contact person: _____

Title: _____

Telephone number: _____

For each treatment works that receives this discharge, provide the following:

Name: _____

Mailing Address: _____

_____

Contact person: _____

Title: _____

Telephone number: _____

If known, provide the NPDES permit number of the treatment works that receives this discharge. _____

Provide the average daily flow rate from the treatment works into the receiving facility. _____ mgd

e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)? _____ Yes X No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

_____

Annual daily volume disposed of by this method: _____

Is disposal through this method _____ continuous or _____ intermittent?

WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 **once for each outfall** (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. **If you answered "no" to question A.8.a**, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

a. Outfall number: 001/001

b. Location

(City or town, if applicable)	(Zip Code)
Louisa / Louisa	VA / VA
(County)	(State)
38°00'05.1" N / 37°59'34.3" N (Latitude)	78°11'49.8" W / 78°07'7.8" W (Longitude)

c. Distance from shore (if applicable): edge/edge ft.

d. Depth below surface (if applicable): edge/edge ft.

e. Average daily flow rate: 0.0923 mgd

f. Does this outfall have either an intermittent or a periodic discharge? ____ Yes X No (go to A.9.g.)

If yes, provide the following information:

Number of times per year discharge occurs: ____

Average duration of each discharge: ____

Average flow per discharge: ____ mgd

Months in which discharge occurs: ____

g. Is outfall equipped with a diffuser? ____ Yes X No

A.10. Description of Receiving Waters.

a. Name of receiving water: Impoundment of Camp Creek/South Anna River

b. Name of watershed (if known): York/York

United States Soil Conservation Service 14-digit watershed code (if known): ____

c. Name of State Management/River Basin (if known): ____

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): ____

d. Critical low flow of receiving stream (if applicable):
acute ____ cfs chronic ____ cfs

e. Total hardness of receiving stream at critical low flow (if applicable): ____ mg/l of $CaCO_3$

A.11. Description of Treatment.

a. What levels of treatment are provided? Check all that apply.

X Primary X Secondary

X Advanced _____ Other. Describe: _____

b. Indicate the following removal rates (as applicable): 0.1/0.311/0.7 (Flow Tiers)

Design BOD_5 removal or Design $CBOD_5$ removal	>95/>95/>95	%
Design SS removal	>95/>95>95	%
Design P removal	>75/>90/>95	%
Design N removal	NA/>85/>90	%
Other _____	_____	%

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

UV Disinfection

If disinfection is by chlorination, is dechlorination used for this outfall? _____ Yes _____ No

d. Does the treatment plant have post aeration? X Yes _____ No

A.12. Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	7.0	s.u.			
pH (Maximum)	8.1	s.u.			
Flow Rate	.2241	mgd	.0890	mgd	365
Temperature (Winter)	17.8	°C	13.6	°C	91
Temperature (Summer)	24.0	°C	22.2	°C	92

* For pH please report a minimum and a maximum daily value

POLLUTANT		MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
		Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.								
BIOCHEMICAL OXYGEN	BOD-5							
DEMAND (Report one)	CBOD-5	28.0	mg/L	3.2	mg/L	49	SM 19 5210B	2.00 mg/L
FECAL COLIFORM (E. Coli)		1046.2	n/100 mL	17.4	n/100 mL	182	Colilert/Colilert-18	1 MPN/100 mL
TOTAL SUSPENDED SOLIDS (TSS)		37.7	mg/L	3.8	mg/L	257	SM 19 2540D	1.00 mg/L

END OF PART A.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

BASIC APPLICATION INFORMATION

PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

B.1. Inflow and Infiltration. Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.

~ <5,000 gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

Smoke testing was performed to identify areas of I & I which were then fixed.

Biannual smoke testing is scheduled for the future.

B.2. Topographic Map. Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

a. The area surrounding the treatment plant, including all unit processes.

b. The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.

c. Each well where wastewater from the treatment plant is injected underground.

d. Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.

e. Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.

f. If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

See attached.

B.3. Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g, chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

See attached.

B.4. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ____Yes _X_No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: _____

Mailing Address: _____

_____

Telephone Number: _____

Responsibilities of Contractor: _____

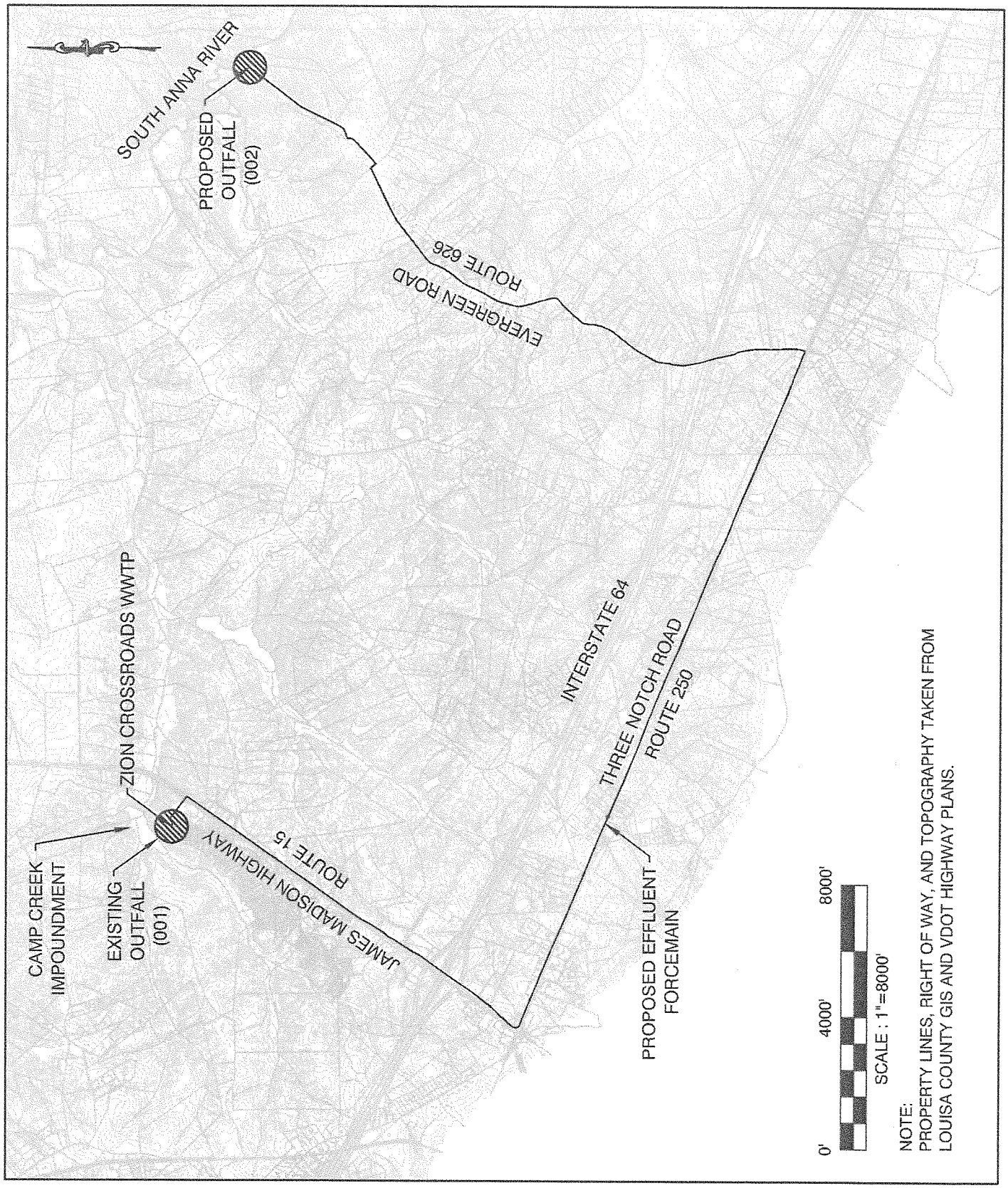
B.5. Scheduled Improvements and Schedules of Implementation. Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

a. List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

001/001 (Camp Creek Impoundment/South Anna River)

b. Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

____Yes _X_No



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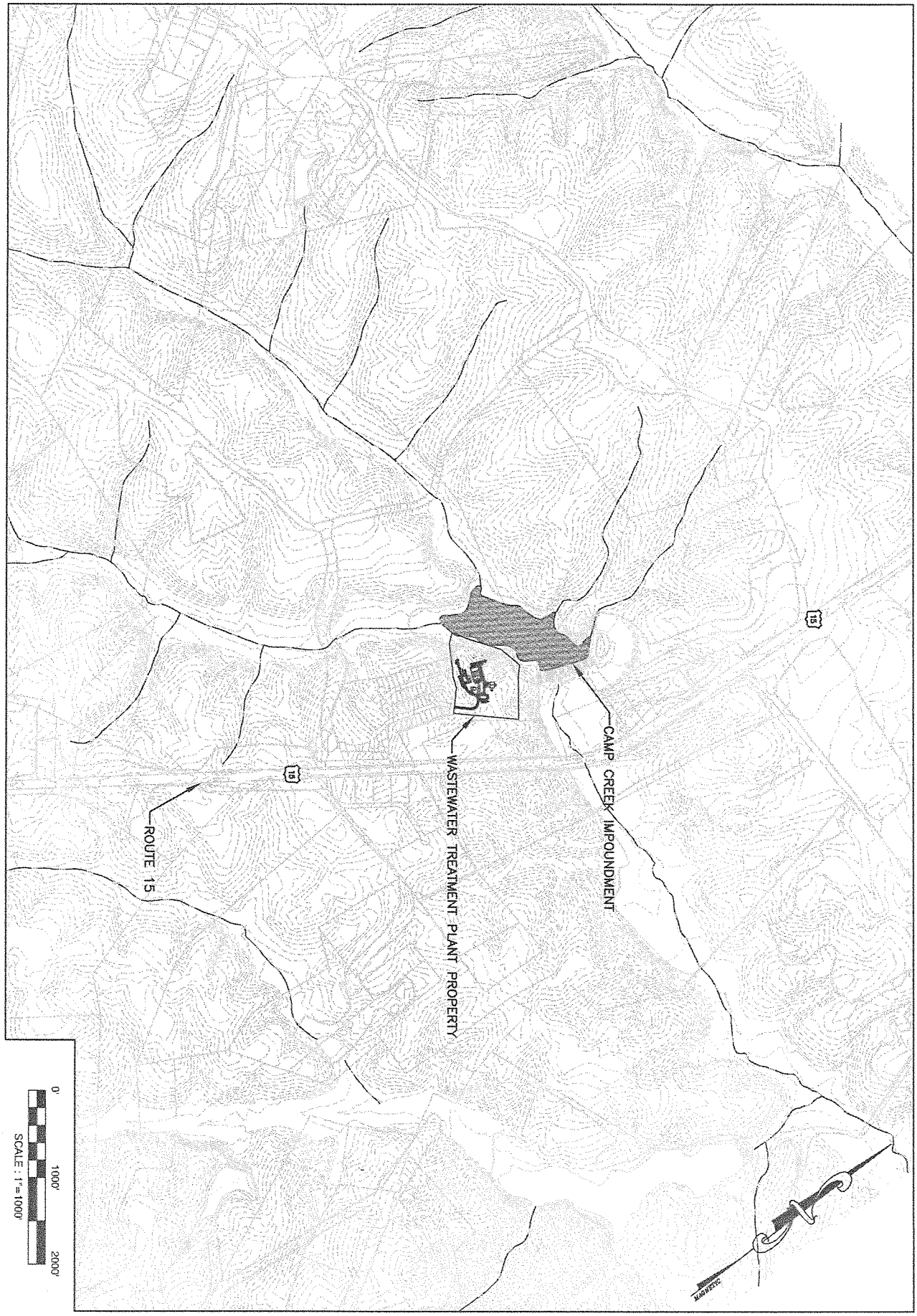
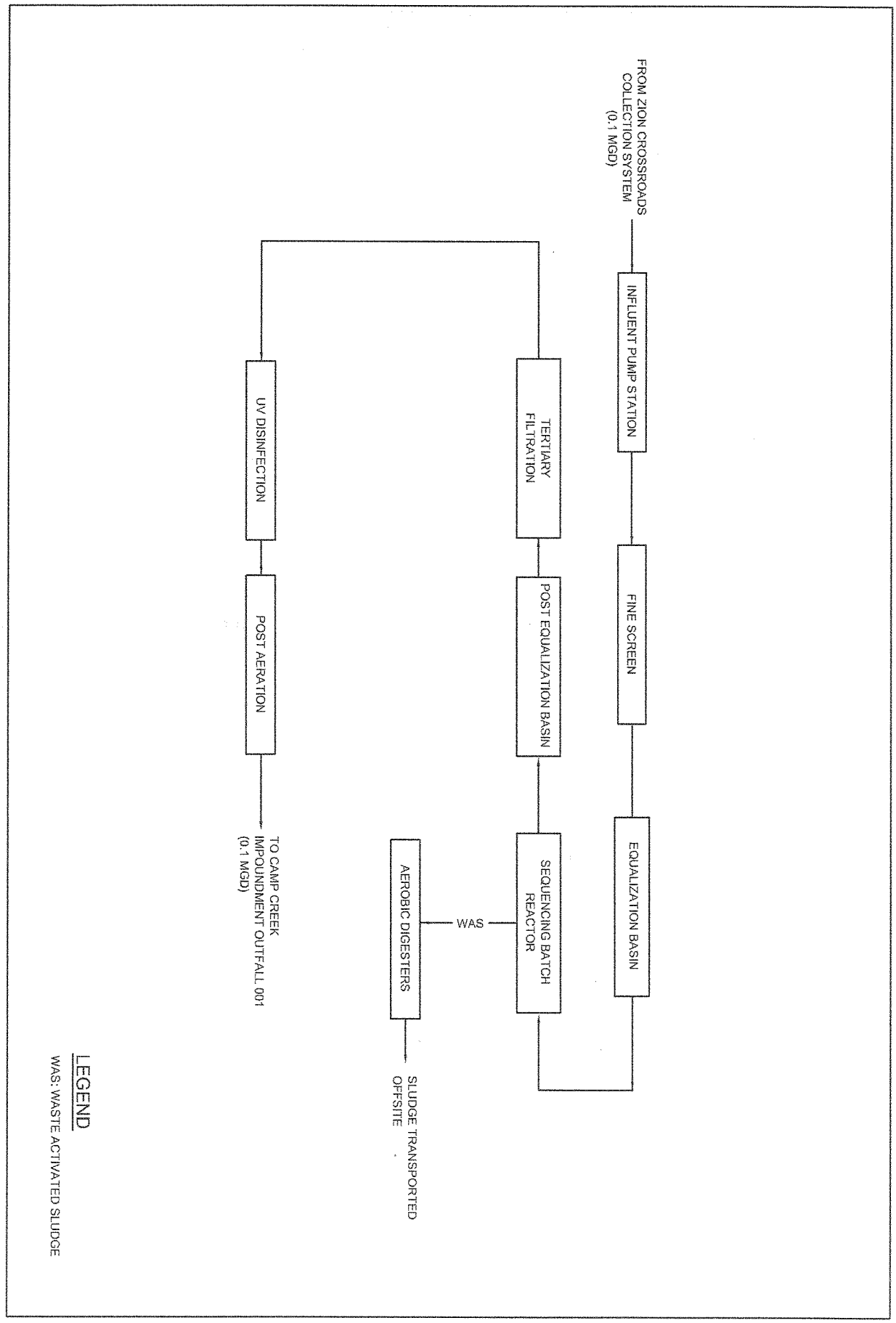
DATE	TITLE	SHEET NO.
JUNE 2012	B.2. OVERALL TOPOGRAPHIC MAP	1
PROJ. NO. 50053662	PROJECT ZION CROSSROADS WWTP VPDES PERMIT APPLICATION	

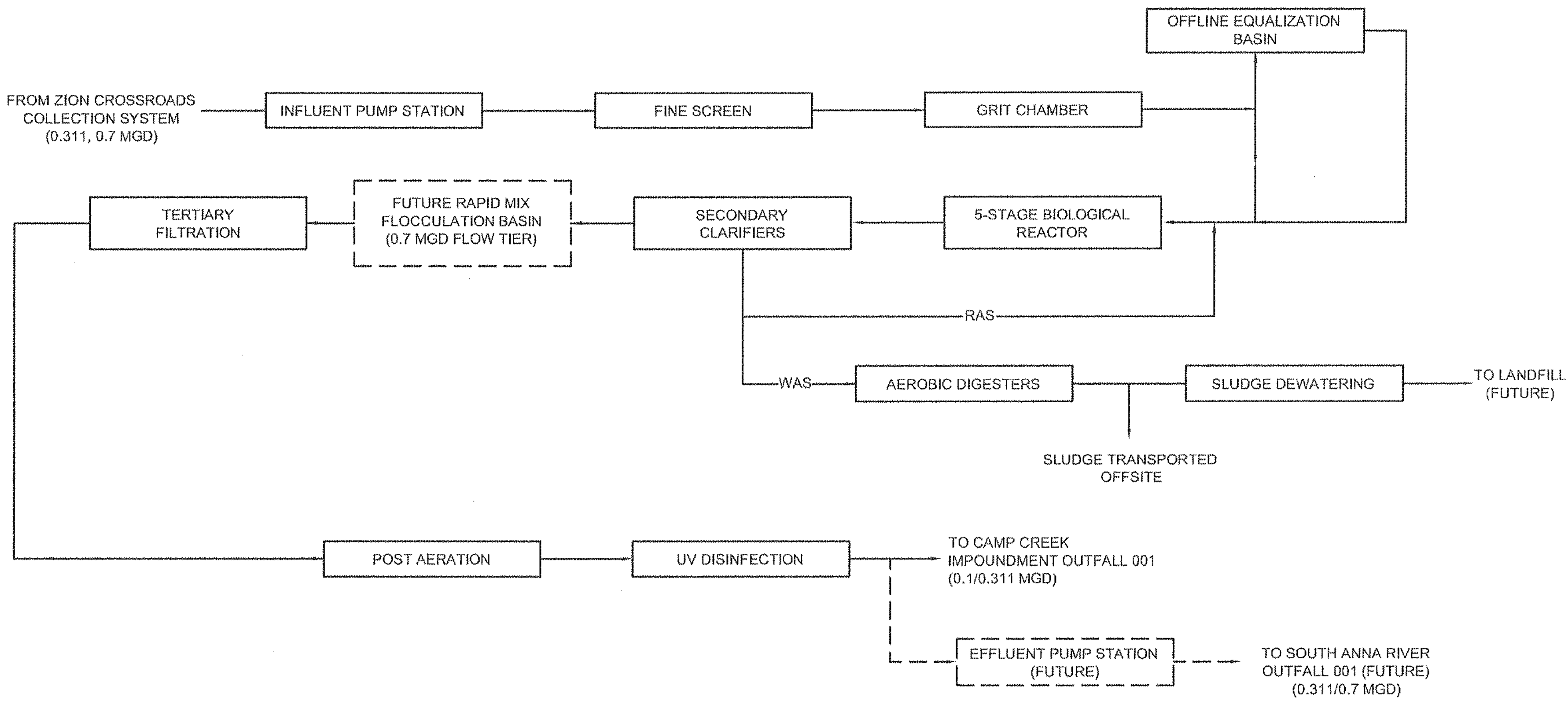


Dewberry Dewberry & Davis, Inc. 4180 INNSLAKE DRIVE GLEN ALLEN, VA. 23060 PHONE: 804.290.7957 FAX: 804.290.7928	DATE JUNE 2012	SCALE 1:1000	TITLE B.2. TOPOGRAPHIC MAP	FIGURE NO. 2
	PROJ. NO. 50053662	PROJECT ZION CROSSROADS WWTP VPDES PERMIT APPLICATION		



Dewberry
Dewberry & Davis, Inc.
4160 INNSLAKE DRIVE
GLEN ALLEN, VA. 23060
PHONE: 804.290.7957
FAX: 804.290.7928

DATE	SCALE	TITLE	FIGURE NO.
JUNE 2012	N.T.S.	B.3. PROCESS FLOW SCHEMATIC (0.1 MGD)	3A
PROJ. NO. 50053662	PROJECT ZION CROSSROADS WWTP VPDES PERMIT APPLICATION		



NOTE:
THE EXISTING PLANT SHOWN IN THIS EXHIBIT INCLUDES IMPROVEMENTS INCLUDED IN THE ZION CROSSROADS WASTEWATER TREATMENT PLANT EXPANSION PROJECT THAT IS CURRENTLY UNDER CONSTRUCTION.

LEGEND

RAS: RETURN ACTIVATED SLUDGE

WAS: WASTE ACTIVATED SLUDGE

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FAX: 804.290.7928

DATE	SCALE	TITLE	FIGURE NO.
JUNE 2012	N.T.S.	B.3. PROCESS FLOW SCHEMATIC (0.311 & 0.7 MGD)	3B
PROJ. NO. 50053662	PROJECT	ZION CROSSROADS WWTP VPDES PERMIT APPLICATION	

c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule MM / DD / YYYY	Actual Completion MM / DD / YYYY
– Begin construction	4 / 1 / 2011	4 / 1 / 2012
– End construction	4 / 30 / 2013	/ /
– Begin discharge	4 / / 2013	/ /
– Attain operational level	6 / / 2013	/ /

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? X Yes ___ No

Describe briefly: Expansion of existing .1 MGD plant to .311 MGD plant.

B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 001

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)	8.8	mg/L	0.3	mg/L	260	SM 19 5400-NH3D	0.10 mg/L
CHLORINE (TOTAL RESIDUAL, TRC)							
DISSOLVED OXYGEN	11.0	mg/L	9.0	mg/L	366	SM 18th-4500-O-G	
TOTAL KJELDAHL NITROGEN (TKN)	6.3	mg/L	1.7	mg/L	195	SM 19 4500-NH3C	0.50 mg/L
NITRATE PLUS NITRITE NITROGEN	38.2	mg/L	21.1	mg/L	364	SM 20 4500 NO3F	0.050 mg/L
OIL and GREASE	<5.00	mg/L	<5.00	mg/L	1	EPA 1664A	5.00 mg/L
PHOSPHORUS (Total)	1.5	mg/L	0.3	mg/L	52	SM 19 4500-P E	0.05 mg/L
TOTAL DISSOLVED SOLIDS (TDS)	876	mg/L	876	mg/L	1	SM 19 2540C	10.0 mg/L
OTHER							

END OF PART B.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule MM / DD / YYYY	Actual Completion MM / DD / YYYY
– Begin construction	9 / 1 / 2012	___/___/_____
– End construction	9 / 1 / 2016	___/___/_____
– Begin discharge	9 / 1 / 2016	___/___/_____
– Attain operational level	9 / 1 / 2016	___/___/_____

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ___Yes X No

Describe briefly: Relocation of the outfall to the South Anna River (Outfall 002)

B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 001

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)	8.8	mg/L	0.3	mg/L	260	SM 19 5400-NH3D	0.10 mg/L
CHLORINE (TOTAL RESIDUAL, TRC)							
DISSOLVED OXYGEN	11.0	mg/L	9.0	mg/L	366	SM 18th-4500-O-G	
TOTAL KJELDAHL NITROGEN (TKN)	6.3	mg/L	1.7	mg/L	195	SM 19 4500-NH3C	0.50 mg/L
NITRATE PLUS NITRITE NITROGEN	38.2	mg/L	21.1	mg/L	364	SM 20 4500 NO3F	0.050 mg/L
OIL and GREASE							
PHOSPHORUS (Total)	1.5	mg/L	0.3	mg/L	52	SM 19 4500-P E	0.05 mg/L
TOTAL DISSOLVED SOLIDS (TDS)							
OTHER							

END OF PART B.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

BASIC APPLICATION INFORMATION

PART C. CERTIFICATION

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:

_X_ Basic Application Information packet

Supplemental Application Information packet:

_X_ Part D (Expanded Effluent Testing Data)

_____ Part E (Toxicity Testing: Biomonitoring Data)

_____ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)

_____ Part G (Combined Sewer Systems)

ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title _____

Signature _____

Telephone number _____

Date signed _____

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:

SUPPLEMENTAL APPLICATION INFORMATION

PART D. EXPANDED EFFLUENT TESTING DATA

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

Effluent Testing: 1.0 mgd and Pretreatment Treatment Works. If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.											
ANTIMONY	<.01	mg/L								EPA 200.8	.01 (all in mg/L)
ARSENIC	<.01	mg/L								EPA 200.8	.01
BERYLLIUM	<.001	mg/L								EPA 200.8	.001
CADMIUM	<.0025	mg/L								EPA 200.8	.0025
CHROMIUM	<.005	mg/L								EPA 200.8	.005
COPPER	.00481	mg/L								SM-3113B	.0015
LEAD	<.005	mg/L								EPA 200.8	.005
MERCURY	<.0002	mg/L								EPA 245.2	.0002
NICKEL	<.01	mg/L								EPA 200.8	.01
SELENIUM	<.01	mg/L								EPA 200.8	.01
SILVER	<.005	mg/L								EPA 200.8	.005
THALLIUM	<.004	mg/L								EPA 200.8	.004
ZINC	.0897	mg/L								EPA 200.8	.01
CYANIDE	<.02	mg/L								SM 4500CN E	.02
TOTAL PHENOLIC COMPOUNDS	<.05	mg/L								EPA 420.1	.05
HARDNESS (AS $CaCO_3$)	184	mg/L								EPA 200.7	
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.											

FACILITY NAME AND PERMIT NUMBER:

Zion Crossroads WWTP VA0090743

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
VOLATILE ORGANIC COMPOUNDS.											
ACROLEIN	<.005	mg/L								EPA 624	.005 (all in mg/L)
ACRYLONITRILE	<.002	mg/L								EPA 624	.002
BENZENE	<.002	mg/L								EPA 624	.002
BROMOFORM	<.002	mg/L								EPA 624	.002
CARBON TETRACHLORIDE	<.002	mg/L								EPA 624	.002
CLOROBENZENE	<.002	mg/L								EPA 624	.002
CHLORODIBROMO-METHANE	<.002	mg/L								EPA 624	.002
CHLOROETHANE	<.002	mg/L								EPA 624	.002
2-CHLORO-ETHYLVINYL ETHER	<.02	mg/L								EPA 624	.02
CHLOROFORM	<.002	mg/L								EPA 624	.002
DICHLOROBROMO-METHANE	<.002	mg/L								EPA 624	.002
1,1-DICHLOROETHANE	<.002	mg/L								EPA 624	.002
1,2-DICHLOROETHANE	<.002	mg/L								EPA 624	.002
TRANS-1,2-DICHLORO-ETHYLENE	<.002	mg/L								EPA 624	.002
1,1-DICHLOROETHYLENE	<.002	mg/L								EPA 624	.002
1,2-DICHLOROPROPANE	<.002	mg/L								EPA 624	.002
1,3-DICHLORO-PROPYLENE	<.002	mg/L								EPA 624	.002
ETHYLBENZENE	<.002	mg/L								EPA 624	.002
METHYL BROMIDE	<.002	mg/L								EPA 624	.002
METHYL CHLORIDE	<.002	mg/L								EPA 624	.002
METHYLENE CHLORIDE	<.002	mg/L								EPA 624	.002
1,1,2,2-TETRACHLORO-ETHANE	<.002	mg/L								EPA 624	.002
TETRACHLORO-ETHYLENE	<.002	mg/L								EPA 624	.002
TOLUENE	<.002	mg/L								EPA 624	.002

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
1,1,1-TRICHLOROETHANE	<.002	mg/L								EPA 624	.002 (all in mg/L)
1,1,2-TRICHLOROETHANE	<.002	mg/L								EPA 624	.002
TRICHLORETHYLENE	<.002	mg/L								EPA 624	.002
VINYL CHLORIDE	<.002	mg/L								EPA 624	.002
Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.											
ACID-EXTRACTABLE COMPOUNDS											
P-CHLORO-M-CRESOL	<.01	mg/L								EPA 625 TTO	.01 (all in mg/L)
2-CHLOROPHENOL	<.01	mg/L								EPA 625 TTO	.01
2,4-DICHLOROPHENOL	<.01	mg/L								EPA 625 TTO	.01
2,4-DIMETHYLPHENOL	<.01	mg/L								EPA 625 TTO	.01
4,6-DINITRO-O-CRESOL	<.01	mg/L								EPA 625 TTO	.01
2,4-DINITROPHENOL	<.02	mg/L								EPA 625 TTO	.02
2-NITROPHENOL	<.01	mg/L								EPA 625 TTO	.01
4-NITROPHENOL	<.01	mg/L								EPA 625 TTO	.01
PENTACHLOROPHENOL	<.01	mg/L								EPA 625 TTO	.01
PHENOL	<.01	mg/L								EPA 625 TTO	.01
2,4,6-TRICHLOROPHENOL	<.01	mg/L								EPA 625 TTO	.01
Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.											
BASE-NEUTRAL COMPOUNDS.											
ACENAPHTHENE	<.01	mg/L								EPA 625 TTO	.01 (all in mg/L)
ACENAPHTHYLENE	<.01	mg/L								EPA 625 TTO	.01
ANTHRACENE	<.01	mg/L								EPA 625 TTO	.01
BENZIDINE	<.02	mg/L								EPA 625 TTO	.02
BENZO(A)ANTHRACENE	<.01	mg/L								EPA 625 TTO	.01

BENZO(A)PYRENE	.01	mg/L								EPA 625 TTO	.01 mg/L

FACILITY NAME AND PERMIT NUMBER:
Zion Crossroads WWTP VA0090743

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
3,4 BENZO-FLUORANTHENE	<.01	mg/L								EPA 625 TTO	.01 (all in mg/L)
BENZO(GHI)PERYLENE	<.01	mg/L								EPA 625 TTO	.01
BENZO(K)FLUORANTHENE	<.01	mg/L								EPA 625 TTO	.01
BIS (2-CHLOROETHOXY) METHANE	<.01	mg/L								EPA 625 TTO	.01
BIS (2-CHLOROETHYL)-ETHER	<.01	mg/L								EPA 625 TTO	.01
BIS (2-CHLOROISO-PROPYL) ETHER	<.01	mg/L								EPA 625 TTO	.01
BIS (2-ETHYLHEXYL) PHTHALATE	<.01	mg/L								EPA 625 TTO	.01
4-BROMOPHENYL PHENYL ETHER	<.01	mg/L								EPA 625 TTO	.01
BUTYL BENZYL PHTHALATE	<.01	mg/L								EPA 625 TTO	.01
2-CHLORONAPHTHALENE	<.01	mg/L								EPA 625 TTO	.01
4-CHLORPHENYL PHENYL ETHER	<.01	mg/L								EPA 625 TTO	.01
CHRYSENE	<.01	mg/L								EPA 625 TTO	.01
DI-N-BUTYL PHTHALATE	<.01	mg/L								EPA 625 TTO	.01
DI-N-OCTYL PHTHALATE	<.01	mg/L								EPA 625 TTO	.01
DIBENZO(A,H) ANTHRACENE	<.01	mg/L								EPA 625 TTO	.01
1,2-DICHLOROBENZENE	<.01	mg/L								EPA 625 TTO	.01
1,3-DICHLOROBENZENE	<.01	mg/L								EPA 625 TTO	.01
1,4-DICHLOROBENZENE	<.01	mg/L								EPA 625 TTO	.01
3,3-DICHLOROBENZIDINE	<.01	mg/L								EPA 625 TTO	.01
DIETHYL PHTHALATE	<.01	mg/L								EPA 625 TTO	.01
DIMETHYL PHTHALATE	<.01	mg/L								EPA 625 TTO	.01
2,4-DINITROTOLUENE	<.01	mg/L								EPA 625 TTO	.01
2,6-DINITROTOLUENE	<.01	mg/L								EPA 625 TTO	.01

1,2-DIPHENYLHYDRAZINE	.01	mg/L								EPA 625 TTO	.01 mg/L

FACILITY NAME AND PERMIT NUMBER:
Zion Crossroads WWTP VA0090743

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE	<.01	mg/L								EPA 625 TTO	.01 (all in mg/L)
FLUORENE	<.01	mg/L								EPA 625 TTO	.01
HEXACHLOROBENZENE	<.01	mg/L								EPA 625 TTO	.01
HEXACHLOROBUTADIENE	<.01	mg/l								EPA 625 TTO	.01
HEXACHLOROCYCLO-PENTADIENE	<.01	mg/L								EPA 625 TTO	.01
HEXACHLOROETHANE	<.01	mg/L								EPA 625 TTO	.01
INDENO(1,2,3-CD)PYRENE	<.01	mg/L								EPA 625 TTO	.01
ISOPHORONE	<.01	mg/L								EPA 625 TTO	.01
NAPHTHALENE	<.01	mg/L								EPA 625 TTO	.01
NITROBENZENE	<.01	mg/L								EPA 625 TTO	.01
N-NITROSODI-N-PROPYLAMINE	<.01	mg/L								EPA 625 TTO	.01
N-NITROSODI- METHYLAMINE	<.01	mg/L								EPA 625 TTO	.01
N-NITROSODI-PHENYLAMINE	<.01	mg/L								EPA 625 TTO	.01
PHENANTHRENE	<.01	mg/L								EPA 625 TTO	.01
PYRENE	<.01	mg/L								EPA 625 TTO	.01
1,2,4-TRICHLOROBENZENE	<.01	mg/L								EPA 625 TTO	.01
Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.											
Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.											

END OF PART D.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:
Zion Crossroads WWTP VA0090743

Form Approved 1/14/99
OMB Number 2040-0086

SUPPLEMENTAL APPLICATION INFORMATION

PART F. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES

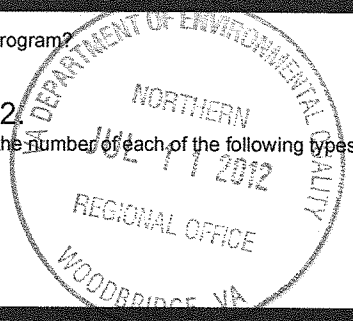
All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete Part F.

GENERAL INFORMATION:

F.1. Pretreatment Program. Does the treatment works have, or is it subject to, an approved pretreatment program?

X* Yes ___ No

*Walmart Distribution Center to be permitted by December 31, 2012.



F.2. Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs). Provide the number of each of the following types of industrial users that discharge to the treatment works.

a. Number of non-categorical SIUs. 1

b. Number of CIUs. 0

SIGNIFICANT INDUSTRIAL USER INFORMATION:

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 and provide the information requested for each SIU.

F.3. Significant Industrial User Information. Provide the name and address of each SIU discharging to the treatment works. Submit additional pages as necessary.

Name: Walmart Distribution Center #7016

Mailing Address: 10695 Freedom Trail
Gordonsvilles, VA 22942

F.4. Industrial Processes. Describe all of the industrial processes that affect or contribute to the SIU's discharge.

Distribution Warehouse

F.5. Principal Product(s) and Raw Material(s). Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.

Principal product(s): Cooling water contact/non-contact, blow down water, facility wash down water

Raw material(s): N/A

F.6. Flow Rate.

a. Process wastewater flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

4896 gpd (___continuous or X intermittent)

b. Non-process wastewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

21754 gpd (___continuous or X intermittent)

F.7. Pretreatment Standards. Indicate whether the SIU is subject to the following:

a. Local limits X Yes ___ No

b. Categorical pretreatment standards ___ Yes X No

If subject to categorical pretreatment standards, which category and subcategory?

F.8. Problems at the Treatment Works Attributed to Waste Discharged by the SIU. Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?

__X__ Yes ____ No If yes, describe each episode.

Increased zinc to treatment plant. Will effect ability to meet zinc limit in December 2012.

RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE:

F.9. RCRA Waste. Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe?

____ Yes __X__ No (go to F.12.)

F.10. Waste Transport. Method by which RCRA waste is received (check all that apply):

_____ Truck _____ Rail _____ Dedicated Pipe

F.11. Waste Description. Give EPA hazardous waste number and amount (volume or mass, specify units).

EPA Hazardous Waste Number	Amount	Units

CERCLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTEWATER:

F.12. Remediation Waste. Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

____ Yes (complete F.13 through F.15.) __X__ No

Provide a list of sites and the requested information (F.13 - F.15.) for each current and future site.

F.13. Waste Origin. Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

F.14. Pollutants. List the hazardous constituents that are received (or are expected to be received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

F.15. Waste Treatment.

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

____ Yes ____ No

If yes, describe the treatment (provide information about the removal efficiency):

b. Is the discharge (or will the discharge be) continuous or intermittent?

____ Continuous ____ Intermittent If intermittent, describe discharge schedule.

END OF PART F.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

Appendix B

Form 2A, Part D Test Data

Analytics Corporation
10329 Stony Run Lane
Ashland, VA 23005
Phone: (804) 365-3000
Fax: (908) 365-3002

June 06, 2012

ANGIE WOODWARD
ENVIRONMENTAL SYSTEMS SERVICE, LTD
218 N. MAIN STREET
CULPEPER, VA 22701

Purchase Order:
Client ID: 1434
Work Order: 1011673

Dear ANGIE WOODWARD

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, May 25, 2012. The signature below certifies that the results are based on the referenced methods and applicable certifications or accreditations are noted for each parameter reported (see key at end of report).

Unless otherwise specified all analyses of solid materials are based on dry weight.

Reported results relate only to the items tested, as received by the laboratory.

On-site analysis (analysis ASAP) is recommended for the following tests: pH, temperature, dissolved oxygen, residual chlorine and sulfite. When performed off-site, these tests do not meet NELAC standards.

Abbreviations:ug/L = micrograms per Liter, mg/L = milligrams per Liter, ug/g = micrograms per gram, mg/kg = milligrams per kilogram ug/wp = micrograms per wipe, ug/ml = micrograms per millimeter, uS/cm = microsiemens per centimeter at 25 degrees Celcius ppb = parts per billion, DF = Dilution Factor.

If you have any questions concerning this report, please feel free to call Client Services at 1-800-888-8061.

Sincerely,

Dawn Casto
Technical Director (or designee)

Enclosures

Analytics Corporation
10329 Stony Run Lane
Ashland, VA 23005
Phone: (804) 365-3000
Fax: (908) 365-3002

ANALYTICAL RESULTS

Workorder: 1011673 1434

Lab ID: 1011673001 Date Received: 05/25/2012 12:00 Matrix Aqueous Liquid
Sample ID: 1434 EFFLUENT Date Collected: Sample Type: GRAB

Parameters	Results	Units	Report Limi	DF	Prepared	By	Analyzed	By	Qual	Certifications
Analytical Method: EPA 200.7					Preparation Method: EPA 200.7					
Total Hardness	184	mg/L		1	05/27/2012 15:45	JRM	5/30/2012 15:39	RW		
Analytical Method: EPA 200.8					Preparation Method: EPA 200.8					
Antimony	<0.0100	mg/L	0.0100	1	05/29/2012 15:34	JRM	5/30/2012 21:10	HB		V
Arsenic	<0.0100	mg/L	0.0100	1	05/29/2012 15:34	JRM	5/30/2012 21:10	HB		V
Beryllium	<0.00100	mg/L	0.0010	1	05/29/2012 15:34	JRM	5/30/2012 21:10	HB		V
Cadmium	<0.00250	mg/L	0.0025	1	05/29/2012 15:34	JRM	5/30/2012 21:10	HB		V
Chromium	<0.00500	mg/L	0.0050	1	05/29/2012 15:34	JRM	5/30/2012 21:10	HB		V
Lead	<0.00500	mg/L	0.0050	1	05/29/2012 15:34	JRM	5/30/2012 21:10	HB		V
Nickel	<0.0100	mg/L	0.0100	1	05/29/2012 15:34	JRM	5/30/2012 21:10	HB		V
Selenium	<0.0100	mg/L	0.0100	1	05/29/2012 15:34	JRM	5/30/2012 21:10	HB		V
Silver	<0.00500	mg/L	0.0050	1	05/29/2012 15:34	JRM	5/30/2012 21:10	HB		V
Thallium	<0.00400	mg/L	0.0040	1	05/29/2012 15:34	JRM	5/30/2012 21:10	HB		V
Zinc	0.0897	mg/L	0.0100	1	05/29/2012 15:34	JRM	5/30/2012 21:10	HB		V
Analytical Method: EPA 245.2										
Mercury	<0.000200	mg/L	0.0002	1	NA	NA	6/1/2012 09:52	MDW		V
Analytical Method: EPA 420.1					Preparation Method: EPA 420.1					
Phenols	<0.0500	mg/L	0.0500	1	05/31/2012 12:00	JLC	5/31/2012 15:40	JLC		V
Analytical Method: EPA 624					Preparation Method: EPA 624					
1,1,1-Trichloroethane	<0.00200	mg/L	0.0020	1	06/02/2012 11:55	SJ	6/2/2012 11:55	SJ		V
1,1,2,2-Tetrachloroethane	<0.00200	mg/L	0.0020	1	06/02/2012 11:55	SJ	6/2/2012 11:55	SJ		V
1,1,2-Trichloroethane	<0.00200	mg/L	0.0020	1	06/02/2012 11:55	SJ	6/2/2012 11:55	SJ		V

Analytics Corporation
10329 Stony Run Lane
Ashland, VA 23005
Phone: (804) 365-3000
Fax: (908) 365-3002

ANALYTICAL RESULTS

Workorder: 1011673 1434

Lab ID: **1011673001** Date Received: 05/25/2012 12:00 Matrix Aqueous Liquid

Sample ID: **1434 EFFLUENT** Date Collected: Sample Type: GRAB

Parameters	Results	Units	Report Limi	DF	Prepared	By	Analyzed	By	Qual	Certifications
1,1-Dichloroethane	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
1,1-Dichloroethene	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
1,2-Dichloroethane	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
1,2-Dichloropropane	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
2-Chloroethyl vinyl ether	<0.0200	mg/L	0.0200	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Acrolein	<0.00500	mg/L	0.0050	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Acrylonitrile	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Benzene	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Bromodichloromethane	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Bromoform	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Bromomethane	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Carbon tetrachloride	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Chlorobenzene	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Chloroethane	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Chloroform	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Chloromethane	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
cis-1,3-Dichloropropene	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Dibromochloromethane	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Ethylbenzene	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Methylene chloride	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
tetrachloroethene	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Toluene	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
trans-1,2-Dichloroethene	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
trans-1,3-Dichloropropene	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Trichloroethene	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V
Vinyl chloride	<0.00200	mg/L	0.0020	1	06/02/2012	11:55 SJ	6/2/2012	11:55 SJ		V

Analytical Method: EPA 625 TTO Preparation Method: EPA 625

1,2 Diphenylhydrazine	<0.0100	mg/L	0.0100	1	05/30/2012	16:02 JRM	6/5/2012	22:58 MBC		

CERTIFICATE OF ANALYSIS

Analytics Corporation
10329 Stony Run Lane
Ashland, VA 23005
Phone: (804) 365-3000
Fax: (908) 365-3002

ANALYTICAL RESULTS

Workorder: 1011673 1434

Lab ID: 1011673001 Date Received: 05/25/2012 12:00 Matrix Aqueous Liquid
Sample ID: 1434 EFFLUENT Date Collected: Sample Type: GRAB

Parameters	Results	Units	Report Limi	DF	Prepared	By	Analyzed	By	Qual	Certifications
1,2,4-Trichlorobenzene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
1,2-Dichlorobenzene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		
1,3-Dichlorobenzene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		
1,4-Dichlorobenzene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		
2,4,6-Trichlorophenol	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
2,4-Dichlorophenol	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
2,4-Dimethylphenol	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
2,4-Dinitrophenol	<0.0200	mg/L	0.0200	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
2,4-Dinitrotoluene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
2,6-Dinitrotoluene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
2-Chloronaphthalene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
2-Chlorophenol	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
2-Nitrophenol	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
3,3-Dichlorobenzidine	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
4,6-Dinitro-2-methylphenol	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
4-Bromophenyl phenyl ether	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
4-Chloro-3-methylphenol	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
4-Chlorophenyl phenyl ether	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
4-Nitrophenol	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Acenaphthene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Acenaphthylene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Anthracene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Benzidine	<0.0200	mg/L	0.0200	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Benzo[a]anthracene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Benzo[a]pyrene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Benzo[b]fluoranthene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Benzo[g,h,i]perylene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Benzo[k]fluoranthene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
bis(2-Chloroethoxy)methane	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
bis(2-Chloroethyl)ether	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V

CERTIFICATE OF ANALYSIS

Analytics Corporation
10329 Stony Run Lane
Ashland, VA 23005
Phone: (804) 365-3000
Fax: (908) 365-3002

ANALYTICAL RESULTS

Workorder: 1011673 1434

Lab ID: **1011673001** Date Received: 05/25/2012 12:00 Matrix Aqueous Liquid

Sample ID: **1434 EFFLUENT** Date Collected: Sample Type: GRAB

Parameters	Results	Units	Report Limi	DF	Prepared	By	Analyzed	By	Qual	Certifications
bis(2-Chloroisopropyl)ether	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
bis(2-Ethylhexyl)phthalate	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Butyl benzyl phthalate	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Chrysene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Dibenz[a,h]anthracene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Dibutyl phthalate	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Diethylphthalate	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Dimethylphthalate	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Di-n-octyl phthalate	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Fluoranthene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Fluorene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Hexachlorobenzene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Hexachlorobutadiene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Hexachlorocyclopentadiene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Hexachloroethane	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Indeno[1,2,3-cd]pyrene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Isophorone	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Naphthalene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Nitrobenzene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
N-Nitrosodimethylamine	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
N-Nitrosodi-n-propylamine	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
N-Nitrosodiphenylamine	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Pentachlorophenol	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Phenanthrene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Phenol	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
Pyrene	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC		V
TCDD	<0.0100	mg/L	0.0100	1	05/30/2012 16:02	JRM	6/5/2012 22:58	MBC	1	

Analytical Method: SM 4500CN E Preparation Method: SM 4500CN C

Analytics Corporation
10329 Stony Run Lane
Ashland, VA 23005
Phone: (804) 365-3000
Fax: (908) 365-3002

ANALYTICAL RESULTS

Workorder: 1011673 1434

Lab ID: **1011673001** Date Received: 05/25/2012 12:00 Matrix Aqueous Liquid
Sample ID: **1434 EFFLUENT** Date Collected: Sample Type: GRAB

Parameters	Results	Units	Report Limi	DF	Prepared	By	Analyzed	By	Qual	Certifications
Cyanide	<0.0200	mg/L	0.0200	1	06/04/2012 15:00	JLC	6/5/2012 14:15	JLC		V
Analytical Method: SM-3113B					Preparation Method: SM3113 Digestion					
Copper	0.00481	mg/L	0.0015	1	05/30/2012 17:32	JRM	5/31/2012 17:31	DMG		V

CERTIFICATE OF ANALYSIS

Analytics Corporation
10329 Stony Run Lane
Ashland, VA 23005
Phone: (804) 365-3000
Fax: (908) 365-3002

ANALYTICAL RESULTS

Workorder: 1011673 1434

Parameter Qualifiers

[1] TCDD delivered as an additional base neutral compound by EPA Method 625

Qualifiers

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Certification Index:

V = Virginia (NELAC) - 1 VAC 30-46 H 1, Laboratory ID: 460160, Certificate #: 1449

SAMPLE CHAIN OF CUSTODY RECORD

Company Environmental Systems Service, Ltd.
Contact Angie Woodward, Interim Lab Manager
Address 218 N. Main St.
Address Culpeper, Virginia 22701
Phone 800-541-2116; 540-825-4961 (fax)

ENVIRONMENTAL SYSTEMS SERVICE, LTD.

www.ess-services.com

218 North Main St.
Post Office Box 520
Culpeper, VA 22701
800-541-2116
540-825-6660 Fax: 540-825-4961

500 Stone St.
Post Office Box 736
Bedford, VA 24523
540-586-5413
Fax 540-586-5530

Project Name/Site _____ P.O.# 13941

Sampled By: _____
(Print Name) (Signature)

ESS SAMPLE ID.	COLLECTION DATE	TIME	SAMPLE LOCATION	CONTAINERS SIZE	G/P	#	GRAB	COMP.	SAMPLE MATRIX	PRESERVATIVE	ANALYSES: Semi-Vol.	VOC's	Cyanide	Phenol	Hardness	Metals*				COMMENTS
1434-1			Effluent	1 L	G	2	X		ww	none	X									*Sb,As,Be,Cd,
1434-2			Effluent	40ml	G	3	X		ww	HCL		X								Cr,Cu,Pb,Hg,
1434-3			Effluent	250ml	P	1	X		ww	NaOH			X							Ni,Se,Ag,Tl,Zn
1434-4			Effluent	1L	G	1	X		ww	H2SO4				X						
1434-5			Effluent	250ml	P	1	X		ww	HN03					X					
1434-6			Effluent	250ml	P	2	X		ww	HN03						X				Cu: Det. Limit
																				0.0015 mg/l
																				Sm3113B
																				Preservative
																				pH Check:

List attached for Semi-Volatiles & Voladiles

Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Stored in Refrigerator by:	5-24-12	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received for Laboratory by:
					5-25-12	1200	JAMES ALTIER

Method of Delivery:
☐ UPS -Analytics ☐ Fed Ex ☐ Hand Delivery
☐ UPS Overnight ☐

On Ice? Y N
Received @ _____ C
☐ Under 2 hours

TAT:
Normal ____ Rush ____
Need Results by _____
Extra charges will apply for Rush TAT.

W.O.# _____
W.O.# _____

Amt Paid $_____
Check # _____

A separate chain of custody must be used for each day of collection.

Revised 5/21/12

Jessica Marinoble

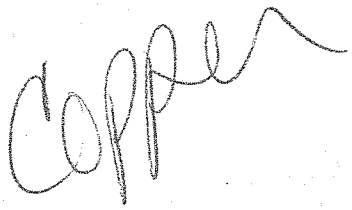
From: Dawn Casto [dcasto@analyticscorp.com]
Sent: Tuesday, May 22, 2012 11:19 AM
To: Jessica Marinoble
Subject: RE: Metals Question

Jessica,

We are certified for copper by SM3113B. I cannot get that limit by EPA 200.8, please r
PQL of 0.0015mg/L. This is a separate digestion.

Thanks

Dawn Casto
Analytics Corporation
10329 Stony Run Lane
Ashland, Va 23005
804-365-3000 ext. 5208
dcasto@analyticscorp.com



ANALYTICS

Sample Container Receipt Form

Version 6-24-2011

Work Order: 1011673

Customer Name: ENVIRONMENTAL SYSTEMS SE 45109195 4510919

CLIENT SAMPLE ID	LAB CONTAINER ID	TYPE OF CONTAINER	QTY	Temp(C)	pH	Chlorine on Arrival (ppm)	Condition Code	Preservative
1434 EFFLUENT	1011673001-G	250P	1	4	2		OK	HNO3
1434 EFFLUENT	1011673001-C	1000G	1	4	2		OK	H2SO4
1434 EFFLUENT	1011673001-J	40MLG	1					HCL
1434 EFFLUENT	1011673001-I	40MLG	1					HCL
1434 EFFLUENT	1011673001-D	500P	1	4	14		OK	NaOH.4C
1434 EFFLUENT	1011673001-H	40MLG	1					HCL
1434 EFFLUENT	1011673001-B	1000G	1	4	6		OK	COOL
1434 EFFLUENT	1011673001-A	1000G	1	4	6		OK	COOL
1434 EFFLUENT	1011673001-F	250P	1	4	2		OK	HNO3
1434 EFFLUENT	1011673001-E	250P	1	4	2		OK	HNO3

Notes

Sample Custodian Signature JAMES ALTIER **Date:** 5-21-12

Version 11-13-2011 CML

Appendix C

VPDES Sewage Sludge Permit Application Form

FACILITY NAME: Zion Crossroads WWTP VPDES PERMIT NUMBER: VA0090743

VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM

SCREENING INFORMATION

This application is divided into sections. Sections A pertain to all applicants. The applicability of Sections B, C and D depend on your facility's sewage sludge use or disposal practices. The information provided on this page will help you determine which sections to fill out.

1. All applicants must complete Section A (General Information).

2. Will this facility generate sewage sludge? X Yes __No

   Will this facility derive a material from sewage sludge? __Yes X No

   If you answered Yes to either, complete Section B (Generation Of Sewage Sludge Or Preparation Of A Material Derived From Sewage Sludge).

3. Will this facility apply sewage sludge to the land? __Yes X No

   Will sewage sludge from this facility be applied to the land? X Yes __No

   If you answered No to both questions above, skip Section C.

   If you answered Yes to either, answer the following three questions:

   a. Will the sewage sludge from this facility meet the ceiling concentrations, pollutant concentrations, Class A pathogen reduction requirements and one of the vector attraction reduction requirements 1-8, as identified in the instructions?
   __Yes X No

   b. Will sewage sludge from this facility be placed in a bag or other container for sale or give-away for application to the land? __Yes X No

   c. Will sewage sludge from this facility be sent to another facility for treatment or blending? X Yes __No
   The sludge is transported to the Louisa Regional WWTP for further treatment. The Louisa Regional WWTP land applies sludge.

   If you answered No to all three, complete Section C (Land Application Of Bulk Sewage Sludge).

   If you answered Yes to a, b or c, skip Section C.

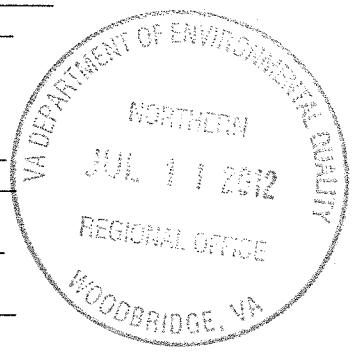
4. Do you own or operate a surface disposal site? __Yes X No

   If Yes, complete Section D (Surface Disposal).

SECTION A. GENERAL INFORMATION

All applicants must complete this section.

1. Facility Information.
   a. Facility name: Zion Crossroads WWTP
   b. Contact person: Wesley Basore
      Title: Wastewater Operations Manager
      Phone: (540) 967-1122
   c. Mailing address:
      Street or P.O. Box: P.O. Box 9
      City or Town: Louisa State: VA Zip: 23093
   d. Facility location:
      Street or Route #: 323 Deer Run Lane
      County: Louisa
      City or Town: Gordonsville State: VA Zip: 22942
   e. Is this facility a Class I sludge management facility? ___Yes X No
   f. Facility design flow rate: 0.1/0.311/0.7 mgd
   g. Total population served: 1,000+
   h. Indicate the type of facility:
      X Publicly owned treatment works (POTW)
      ___ Privately owned treatment works
      ___ Federally owned treatment works
      ___ Blending or treatment operation
      ___ Surface disposal site
      ___ Other (describe): _____



2. Applicant Information. If the applicant is different from the above, provide the following:
   a. Applicant name: _____
   b. Mailing address:
      Street or P.O. Box: _____
      City or Town: _____ State: _____ Zip: _____
   c. Contact person: _____
      Title: _____
      Phone: ( ) _____
   d. Is the applicant the owner or operator (or both) of this facility?
      _____owner X operator
   e. Should correspondence regarding this permit be directed to the facility or the applicant? (Check one)
      _____ facility X applicant

3. Permit Information.
   a. Facility's VPDES permit number (if applicable): VA0090743
   b. List on this form or an attachment, all other federal, state or local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices:

Permit Number:	Type of Permit:
VA 0067954	VPDES

4. Indian Country. Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country? ___Yes X No If yes, describe:

_____

5. Topographic Map. Provide a topographic map or maps (or other appropriate maps if a topographic map is unavailable) that shows the following information. Maps should include the area one mile beyond all property boundaries of the facility:
   a. Location of all sewage sludge management facilities, including locations where sewage sludge is generated, stored, treated, or disposed.
   b. Location of all wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries.

   See attached.

6. Line Drawing. Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction.

   Aerobic digestion and transport to Louisa Regional WWTP.

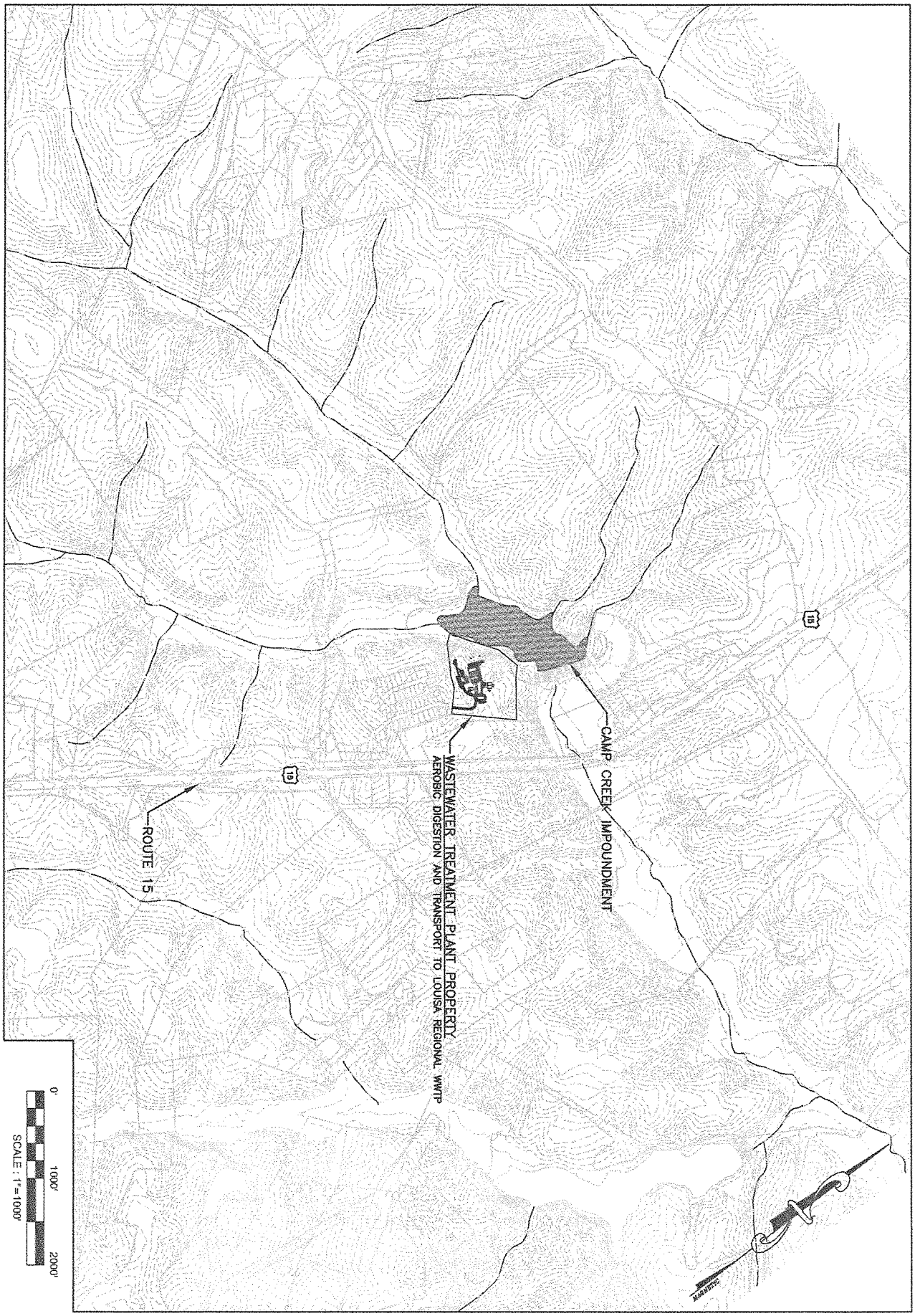
7. Contractor Information. Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor? __Yes _X_No
   If yes, provide the following for each contractor (attach additional pages if necessary).
   Name: _____
   Mailing address:
   Street or P.O. Box: _____
   City or Town: _____ State: _____ Zip: _____
   Phone: ( ) _____
   Contractor's Federal, State or Local Permit Number(s) applicable to this facility's sewage sludge:
   _____
   If the contractor is responsible for the use and/or disposal of the sewage sludge, provide a description of the service to be provided to the applicant and the respective obligations of the applicant and the contractor(s).

8. Pollutant Concentrations. Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants which limits in sewage sludge have been established in 9 VAC 25-31-10 et seq. for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old.

POLLUTANT	CONCENTRATION (mg/kg dry weight)	SAMPLE DATE	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
Arsenic				
Cadmium				
Chromium				
Copper				
Lead				
Mercury				
Molybdenum				
Nickel				
Selenium				
Zinc				

9. Certification. Read and submit the following certification statement with this application. Refer to the instructions to determine who is an officer for purposes of this certification. Indicate which parts of the application you have completed and are submitting:

   _X_ Section A (General Information)
   _X_ Section B (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)
   ____ Section C (Land Application of Bulk Sewage Sludge)
   ____ Section D (Surface Disposal)



Dewberry Dewberry & Davis, Inc. 4180 INNSLAKE DRIVE GLEN ALLEN, VA. 23060 PHONE: 804.290.7957 FAX: 804.290.7928	DATE JUNE 2012	SCALE 1:1000	TITLE A.5. TOPOGRAPHIC MAP	FIGURE NO. 4
	PROJ. NO. 50053662	PROJECT ZION CROSSROADS WWTP VPDES PERMIT APPLICATION		

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title _____

Signature _____ Date Signed _____

Telephone number _____

Upon request of the department, you must submit any other information necessary to assess sewage sludge use or disposal practices at your facility or identify appropriate permitting requirements.

SECTION B. GENERATION OF SEWAGE SLUDGE OR PREPARATION OF A MATERIAL DERIVED FROM SEWAGE SLUDGE

Complete this section if your facility generates sewage sludge or derives a material from sewage sludge

1. Amount Generated On Site.
   Total dry metric tons per 365-day period generated at your facility: 96 dry metric tons

2. Amount Received from Off Site. If your facility receives sewage sludge from another facility for treatment, use or disposal, provide the following information for each facility from which sewage sludge is received. If you receive sewage sludge from more than one facility, attach additional pages as necessary.
   a. Facility name: _____
   b. Contact Person: _____
      Title: _____
      Phone ( ) _____
   c. Mailing address:
      Street or P.O. Box: _____
      City or Town: _____ State: _____ Zip: _____
   d. Facility Address: _____
      (not P.O. Box) _____
   e. Total dry metric tons per 365-day period received from this facility: _____ dry metric tons
   f. Describe, on this form or on another sheet of paper, any treatment processes known to occur at the off-site facility, including blending activities and treatment to reduce pathogens or vector attraction characteristics:
      _____
      _____

3. Treatment Provided at Your Facility.
   a. Which class of pathogen reduction is achieved for the sewage sludge at your facility?
      ___Class A X Class B ___Neither or unknown
   b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge: aerobic digestion
      _____
   c. Which vector attraction reduction option is met for the sewage sludge at your facility?
      ___ Option 1 (Minimum 38 percent reduction in volatile solids)
      ___ Option 2 (Anaerobic process, with bench-scale demonstration)
      ___ Option 3 (Aerobic process, with bench-scale demonstration)
      X Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
      ___ Option 5 (Aerobic processes plus raised temperature)
      ___ Option 6 (Raise pH to 12 and retain at 11.5)
      ___ Option 7 (75 percent solids with no unstabilized solids)
      ___ Option 8 (90 percent solids with unstabilized solids)
      ___ None or unknown
   d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge: aerobic digestion
      _____
   e. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities, including blending, not identified in a - d above: The sewage sludge from this facility is sent to another facility for further treatment and blending.
      _____

4. Preparation of Sewage Sludge Meeting Ceiling and Pollutant Concentrations, Class A Pathogen Requirements and One of Vector Attraction Reduction Options 1-8 (EQ Sludge).
   (If sewage sludge from your facility does not meet all of these criteria, skip Question 4.)
   a. Total dry metric tons per 365-day period of sewage sludge subject to this section that is applied to the land: _____ dry metric tons
   b. Is sewage sludge subject to this section placed in bags or other containers for sale or give-away?

__Yes __No

5. Sale or Give-Away in a Bag or Other Container for Application to the Land.

(Complete this question if you place sewage sludge in a bag or other container for sale or give-away prior to land application. Skip this question if sewage sludge is covered in Question 4.)

a. Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land:_____ dry metric tons

b. Attach, with this application, a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land.

6. Shipment Off Site for Treatment or Blending.

(Complete this question if sewage sludge from your facility is sent to another facility that provides treatment or blending. This question does not apply to sewage sludge sent directly to a land application or surface disposal site. Skip this question if the sewage sludge is covered in Questions 4 or 5. If you send sewage sludge to more than one facility, attach additional sheets as necessary.)

a. Receiving facility name: Louisa Regional WWTP

b. Facility contact: Wesley Basore
Title: Wastewater Operations Manager
Phone: (540) 967-1122

c. Mailing address:
Street or P.O. Box: P.O. Box 9
City or Town: Louisa State: VA Zip: 23093

d. Total dry metric tons per 365-day period of sewage sludge provided to receiving facility: 96 dry metric tons

e. List, on this form or an attachment, the receiving facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the receiving facility's sewage sludge use or disposal practices:

Permit Number:	Type of Permit:
VA 0067954	VPDES

f. Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility? X Yes ___No
Which class of pathogen reduction is achieved for the sewage sludge at the receiving facility?
___Class A X Class B ___Neither or unknown
Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce pathogens in sewage sludge: Aerobic Digestion per Alternative 2 in 9VAC25-31-710

g. Does the receiving facility provide additional treatment to reduce vector attraction characteristics of the sewage sludge? X Yes ___No
Which vector attraction reduction option is met for the sewage sludge at the receiving facility?
___ Option 1 (Minimum 38 percent reduction in volatile solids)
___ Option 2 (Anaerobic process, with bench-scale demonstration)
___ Option 3 (Aerobic process, with bench-scale demonstration)
X Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
___ Option 5 (Aerobic processes plus raised temperature)
___ Option 6 (Raise pH to 12 and retain at 11.5)
___ Option 7 (75 percent solids with no unstabilized solids)
___ Option 8 (90 percent solids with unstabilized solids)
___ None unknown
Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce vector attraction properties of sewage sludge: Alternative 4 in 9VAC25-31-720 B.,4.

h. Does the receiving facility provide any additional treatment or blending not identified in f or g above?
___Yes X No
If yes, describe, on this form or another sheet of paper, the treatment processes not identified in f or g above:

i. If you answered yes to f., g or h above, attach a copy of any information you provide to the receiving facility

to comply with the "notice and necessary information" requirement of 9 VAC 25-31-530.G.

j Does the receiving facility place sewage sludge from your facility in a bag or other container for sale or give-away for application to the land? ___Yes _X_No
If yes, provide a copy of all labels or notices that accompany the product being sold or given away.

k. Will the sewage sludge be transported to the receiving facility in a truck-mounted watertight tank normally used for such purposes? _X_ Yes ___ No. If no, provide description and specification on the vehicle used to transport the sewage sludge to the receiving facility.
Show the haul route(s) on a location map or briefly describe the haul route below and indicate the days of the week and the times of the day sewage sludge will be transported. _____
See attached haul route map and directions. Sludge is transported every Wednesday morning.
_____

7. Land Application of Bulk Sewage Sludge.
(Complete Question 7.a if sewage sludge from your facility is applied to the land, unless the sewage sludge is covered in Questions 4, 5 or 6; complete Question 7.b, c & d only if you are responsible for land application of sewage sludge.)

a. Total dry metric tons per 365-day period of sewage sludge applied to all land application sites:_____dry metric tons

b. Do you identify all land application sites in Section C of this application? ___Yes ___No
If no, submit a copy of the Land Application Plan (LAP) with this application (LAP should be prepared in accordance with the instructions).

c. Are any land application sites located in States other than Virginia? ___Yes ___No
If yes, describe, on this form or on another sheet of paper, how you notify the permitting authority for the States where the land application sites are located. Provide a copy of the notification.
_____
_____

d. Attach a copy of any information you provide to the owner or lease holder of the land application sites to comply with the "notice and necessary" information requirement of 9 VAC 25-31-530 F and/or H (Examples may be obtained in Appendix IV).

8. Surface Disposal.
(Complete Question 8 if sewage sludge from your facility is placed on a surface disposal site.)

a. Total dry metric tons per 365-day period of sewage sludge from your facility placed on all surface disposal sites: _____ dry metric tons

b. Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?
___Yes ___No
If no, answer questions c - g for each surface disposal site that you do not own or operate. If you send sewage sludge to more than one surface disposal site, attach additional pages as necessary.

c. Site name or number: _____

d. Contact person: _____
Title: _____
Phone: ( )_____
Contact is: ___Site Owner ___Site operator

e. Mailing address.
Street or P.O. Box:_____
City or Town:_____ State:_____ Zip:_____

f. Total dry metric tons per 365-day period of sewage sludge from your facility placed on this surface disposal site: _____ dry metric tons

g. List, on this form or an attachment, the surface disposal site VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the sewage sludge use or disposal practices at the surface disposal site:

Permit Number:	Type of Permit:
_____	_____
_____	_____

9. Incineration.
(Complete Question 9 if sewage sludge from your facility is fired in a sewage sludge incinerator.)

Google

Directions to 131 Pine Ridge Dr, Louisa, VA 23093
19.3 mi – about **34 mins**

323 Deer Run Dr, Gordonsville, VA 22942

1.	Head **southwest** on **Deer Run Dr** toward **Quail Hunt Pl** About 58 secs	go 0.3 mi total 0.3 mi
2.	Turn left at **Beaver Dam Pl** About 1 min	go 0.4 mi total 0.7 mi
3.	At the traffic circle, take the **2nd** exit	go 0.1 mi total 0.8 mi
4.	Turn left onto **US-15 N/James Madison Hwy** About 10 mins	go 5.7 mi total 6.5 mi
5.	Turn right onto **VA-22 E/Louisa Rd** Continue to follow VA-22 E About 18 mins	go 11.6 mi total 18.1 mi
6.	Turn right onto **US-33 E** About 2 mins	go 0.8 mi total 18.9 mi
7.	Turn right onto **Pine Ridge Dr** Destination will be on the left About 59 secs	go 0.4 mi total 19.3 mi

131 Pine Ridge Dr, Louisa, VA 23093

a. Total dry metric tons per 365-day period of sewage sludge from your facility fired in a sewage sludge incinerator: _____ dry metric tons

b. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired?
___Yes ___No
If no, answer questions c - g for each sewage sludge incinerator that you do not own or operate. If you send sewage sludge to more than one sewage sludge incinerator, attach additional pages as necessary.

c. Incinerator name or number: _____

d. Contact person: _____
Title: _____
Phone: ( )_____
Contact is: ___Incinerator Owner ___Incinerator Operator

e. Mailing address.
Street or P.O. Box:_____
City or Town:_____ State:_____ Zip:_____

f. Total dry metric tons per 365-day period of sewage sludge from your facility fired in this sewage sludge incinerator: _____ dry metric tons

g. List on this form or an attachment the numbers of all other federal, state or local permits that regulate the firing of sewage sludge at this incinerator:

Permit Number:	Type of Permit:
_____	_____
_____	_____

10. Disposal in a Municipal Solid Waste Landfill.

(Complete Question 10 if sewage sludge from your facility is placed on a municipal solid waste landfill. Provide the following information for each municipal solid waste landfill on which sewage sludge from your facility is placed. If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.)

a. Landfill name: _____

b. Contact person: _____
Title: _____
Phone: ( )_____
Contact is: ___Landfill Owner ___Landfill Operator

c. Mailing address.
Street or P.O. Box:_____
City or Town:_____ State:_____ Zip:_____

d. Landfill location.
Street or Route #:_____
County: _____
City or Town: _____ State:_____ Zip:_____

e. Total dry metric tons per 365-day period of sewage sludge placed in this municipal solid waste landfill: _____ dry metric tons

f. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the operation of this municipal solid waste landfill:

Permit Number:	Type of Permit:
_____	_____
_____	_____

g. Does sewage sludge meet applicable requirements in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq., concerning the quality of materials disposed in a municipal solid waste landfill?
___Yes ___No

h. Does the municipal solid waste landfill comply with all applicable criteria set forth in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq.? ___Yes ___No

i. Will the vehicle bed or other container used to transport sewage sludge to the municipal solid waste landfill be watertight and covered? ___ Yes ___ No
Show the haul route(s) on a location map or briefly describe the route below and indicate the days of the week and time of the day sewage sludge will be transported. _____
_____

Appendix D

VPDES Permit Application Addendum

VPDES Permit Application Addendum

1. **Entity to whom the permit is to be issued:** Louisa County Water Authority
   Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. **Is this facility located within city or town boundaries?** Y / (N)

3. **Provide the tax map parcel number for the land where the discharge is located.**
   PIN 36 12 B - Camp Creek Impoundment discharge / PIN 54 9 - South Anna River discharge (preliminary location)

4. **For the facility to be covered by this permit, how many acres will be disturbed during the next five years due to new construction activities?**

5. **What is the design average effluent flow of this facility?** 0.1 MGD
   For industrial facilities, provide the max. 30-day average production level, include units:

   In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? (Y) / N
   If "Yes", please identify the other flow tiers (in MGD) or production levels: 0.311, 0.7
   Please consider the following questions for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?

6. **Nature of operations generating wastewater:**
   Domestic

   50 % of flow from domestic connections/sources
   Number of private residences to be served by the treatment works: ~350

   50 % of flow from non-domestic connections/sources

7. **Mode of discharge:** X Continuous ____ Intermittent ____ Seasonal
   Describe frequency and duration of intermittent or seasonal discharges:

8. **Identify the characteristics of the receiving stream at the point just above the facility's discharge point:**
   - X Permanent stream, never dry (South Anna River)
   - X Intermittent stream, usually flowing, sometimes dry
   - __ Ephemeral stream, wet-weather flow, often dry
   - __ Effluent-dependent stream, usually or always dry without effluent flow
   - __ Lake or pond at or below the discharge point (Camp Creek Impoundment)
   - __ Other:

9. **Approval Date(s):**
   O & M Manual 2001 **Sludge/Solids Management Plan** NA

   Have there been any changes in your operations or procedures since the above approval dates? Y / (N)